

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Jay A. Fishman                      Art Unit : Unknown  
Serial No. :    Examiner : Unknown  
Filed :  
Title : MOLECULAR SEQUENCE OF SWINE RETROVIRUS AND METHODS OF  
USE

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Under 35 USC §120, this application relies on the earlier filing date of application serial number 09/661,858, filed on September 14, 2000, which is a divisional of U.S.S.N. 08/766,528, filed on December 13, 1996, which is a continuation-in-part of U.S.S.N. 08/572,645, filed on December 14, 1995. The references listed on the attached form PTO-1449 were submitted to and/or cited by the Office in the prior applications and, therefore, are not provided in this application:

This statement is being filed with the application. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 11/26/03

Laurie Lawrence  
Laurie Butler Lawrence  
Reg. No. 46,593

Fish & Richardson P.C.  
225 Franklin Street  
Boston, MA 02110-2804  
Telephone: (617) 542-5070  
Facsimile: (617) 542-8906

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Substitute Form PTO-1449 (Modified)  <b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. <b>14846-011004</b>	Application No.
	Applicant <b>Jay A. Fishman</b>		
	Filing Date	Group Art Unit	

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	5,089,386		Stackebrandt et al.	435	6	
	AB	5,614,187		Sachs	424	93.21	
	AC						

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AD	WO 93/04169	3/1993	WIPO				
	AE	WO 95/31566	11/1995	WIPO				
	AF	WO 97/21836	6/1997	WIPO				

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AG	Aaronson et al., "Endogenous Type-C RNA Viruses of Mammalian Cells," <i>Bio. et Biophys. Acta</i> 458:323-354 (1976)
	AH	Alexander et al., "Medicated Early Weaning: A Method of Breaking the Cycle of Endemic Infection," <i>Proc. 6<sup>th</sup> Int. Congr. Pig. Vet. Sec, Copenhagen</i> (1980)
	AI	Armstrong et al., "C-type virus particles in pig kidney cell lines," <i>J. Gen. Virol.</i> 10:195-198 (1971)
	AJ	Auchincloss, Jr., "Xenogeneic Transplantation," <i>Transplantation</i> 46:1-19 (1988)
	AK	Benveniste et al., "Evolution of type C viral genes: preservation of ancestral murine type C viral sequences in pig cellular DNA" <i>PNAS</i> 72:4090-4094 (1975)
	AL	Benveniste et al., "Multiple divergent copies of endogenous C-type virogenes in mammalian cells," <i>Nature</i> 252:170-173 (1974)
	AM	Beneviste et al., "Homology Between Type-C Viruses of Various Species as Determined by Molecular Hybridization," <i>Proc. Nat. Acad. Sci., USA</i> Vol. 70, No. 12, Part I, pp. 3316-3320 (1973)
	AN	Betts, "Pathogen-Free Pigs for Research and the Practical Control of Pig Diseases," <i>The Veterinary Record</i> , 79:49:1349-1356 (1961)
	AO	Betts et al., "The Production by Hysterectomy of Pathogen-Free, Colostrum-Deprived Pigs and the Foundation of a Minimal-Disease Herd," <i>Veterinary Record</i> 72:461-468 (1960)
	AP	Bouillant et al., "Multisequential transformation of a pig cell line (PFT): Correlations between tumorigenicity and chromosome and ultrastructural markers," <i>JNCI</i> 64(4):783-788 (1980)
	AQ	Bouillant et al., "Nontumoral, benign and malignant stages of transformation of a diploid pig cell line. A Review," <i>Can. J. Comp. Med.</i> 45:279-290 (1981)
	AR	Bouillant et al., "Type C virus production by a continuous line of pig oviduct cells (PFT)," <i>J. Gen. Virol.</i> 27:173 (1975)

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EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

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Other Documents (include Author, Title, Date, and Place of Publication)		
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	AS	Bouillant et al., "Ultrastructural Comparison of Oncovirinae (type C), Spumavirinae, and Lentivirinae: three Subfamilies of Retroviridae Found in Farm Animals," <i>J. Nat. Cancer Institute</i> 72:1075 (1984)
	AT	Bowes, "Localization of a retroviral element within the rd gene coding the Beta Subunit of cGMP phosphodiesterase," <i>PNAS USA</i> 90:2955-2959 (1993)
	AU	Brede et al., "Bacteriological and Virological Considerations in Primate Transplants," <i>Primates in Medicine</i> , Vol. 7, pp. 18-28 (1972)
	AV	Busse et al., "Further investigations on the porcine lymphoma C-type particle (PLCP) and the possible biological significance of the virus in pigs," <i>Ann. Rech. Vet.</i> 5(4):651-658 (1978)
	AW	Busse et al., "Partial analysis of the polypeptide composition of a porcine lymphoma C-type particle (PLCP)" <i>Zbl. Vet. Med. B.</i> 28:118-125 (1981)
	AX	Calne, "Organ Transplantation Between Widely Disparate Species," <i>Transplantation Proceedings</i> Vol. II, No. 4, pp. 550-553 (1970)
	AY	Caldwell et al., "Swine Repopulation II. Performance of 'Disease-Free' Boars on Farms with Diseased Pigs," <i>American Veterinary Medical Association</i> 135:504-505 (1959)
	AZ	Castro et al., "Persistent Infection of Baboons and Rhesus Monkeys with Different Strains of HIV-2," <i>Virology</i> 184:219-226 (1991)
	AAA	Chen B-F et al., "Characterization of a Bicistronic Retroviral Vector Composed of the Swine Vesicular Disease Virus Internal Ribosome Entry Site," <i>J. Virol.</i> , 67:2142-2148 (1993)
	ABB	Chiche, "Xenotransplantation: Baboons as Potential Liver Donors," <i>Transplantation</i> 6:1418-1421 (1993)
	ACC	D'Aquila, R.T., "HIV-1 chemotherapy and drug resistance," <i>Clinical and Diagnostic Virology</i> 3:299-316 (1995)
	ADD	D'Aquila, R.T. et al., "Zidovudine Resistance and HIV-1 Disease Progression during Antiretroviral Therapy," <i>Annals of Internal Medicine</i> 122(6):401-408 (1995)
	AEE	Delassus et al., "Genetic Organization of the Gibbon Ape Leukemia Virus," <i>Virology</i> 173:205-213 (1989)
	AFF	Devare et al., "Nucleotide Sequence of the Simian Sarcoma Virus Genome: Demonstration that its Acquired Cellular Sequences Encode the Transforming Gene Product p28," <i>PNAS USA</i> 80:731-735 (1983)
	AGG	Eron, J.J. et al., "Susceptibility testing by polymerase chain reaction DNA quantitation: A method to measure drug resistance of human immunodeficiency virus type 1 isolates," <i>PNAS USA</i> 89:3241-3245 (1992)
	AHH	Fishman, J.A., "Miniature swine as organ donors for man: Strategies for prevention of xenotransplant-associated infections," <i>Xenotransplantation</i> 1:47-57 (1994)
	AII	Fishman, J.A., "Preventing infections in xenotransplantation: xenosis from miniature swine," <i>Xeno</i> 3(4):72-77 (1995)
	AJJ	Frazier, "Evidence for retrovirus in miniature swine with radiation-induced leukemia or metaplasia," <i>Arch. of Virology</i> 83:83-97 (1985)
	AKK	Frazier et al., "Virus association with <sup>90</sup> Sr Induced leukemia of miniature swine," <i>Comparative Leukemia Res.</i> 36:440-445 (1969)
	ALL	Gerard et al., "DNA Encoding a Novel Reverse Transcriptase..." <i>European Molecular Biology Laboratory</i> , Database Accession No. AAQ91980 (11 April 1995)

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	AMM	Jarrett, "Evidence for the viral etiology of leukemia in the domestic mammals," <i>Adv. Cancer Res.</i> 13 (1970)
	ANN	Kadota et al., "Ultrastructure and C-type particles in myeloid leukemia of a pig," <i>Vet. Pathol.</i> 21:263-265 (1984)
	AOO	Kaeffer et al., "Histocompatible miniature pig (d/d haplo-type): generation of hybridomas secreting A or M monoclonal antibody," <i>Hybridoma</i> 10:731 (1991)
	APP	Kaeffer et al., "Immortal porcine lymphoblastoid cell lines: interest for veterinary and medical research," <i>Vet. Res.</i> 25:425 (1994)
	AQQ	Kaeffer et al., "Histocompatible miniature boar model: selection of transformed cell lines of B and T lineages producing retrovirus," <i>Int. J. Cancer</i> 46:481-488 (1990)
	ARR	Kaeffer et al., "Epithelioid and fibroblastic cell lines derived from the ileum of an adult histocompatible miniature board (dd/d haplotype) and immortalized by SV40 plasmid," <i>Euro. J. of Cell Biology</i> 62:152-162(1993)
	ASS	Kalter, "The Nonhuman Primate as Potential Organ Donor for Man: Virological Considerations," <i>Xenotransplantation: The Transplantation of Organs and Tissues Between Species</i> pp/ 457-479 (1991)
	ATT	Leman et al., "Diseases of Swine" 7 <sup>th</sup> Ed, Ames, Iowa, Iowa State University Press (1992) (Table of Contents only)
	AUU	Letvin et al., "Infection of Baboons with Human Immunodeficiency Virus-2 (HIV-2)," <i>J. Infectious Diseases</i> 156:406-407 (1987)
	AVV	Lieber et al., "Biologic and immunologic properties of porcine Type C viruses," <i>Virology</i> 66:616 (1975)
	AWW	Lieber et al., "Mammalian cells in culture frequently release type C viruses," <i>Science</i> 182:56-59 (1973)
	AXX	McClure et al., "HIV Infection of Primate Lymphocytes and Conservation of the CD4 Receptor," <i>Nature</i> 330:487-489 (1987)
	AYY	Metzger et al., "Transplantation in Miniature Swine," <i>J. Immunol.</i> 127:769-775 (1981)
	AZZ	Moehring et al., "The Exogenous RD-114 and the Related Endogenous Proviral Element ECE1 of Domestic Cat..." <i>European Molecular biological Laboratory</i> , Database Accession No. X51929 (02 April 1990)
	AAAA	Moennig et al., "C-type particles produced by a permanent cell line from a leukemic pig. II. Physical chemical, and serological characterization of the particles," <i>Virology</i> 57:179 (1974)
	ABBB	Murphy et al., "The Cape Western Baboon in Organ Allotransplantation," <i>Transplantation Proceedings</i> 4:546-549 (1970)
	ACCC	Niekrasz et al., "The Pig as Organ Donor for Man," <i>Transplantation Proceedings</i> , 24:625-626 (1992)
	ADDD	Petters et al., "Gene transfer in swine embryos by injection of cells infected with retrovirus vectors," <i>J. Exp. Zoology</i> 242:85-88 (1987)
	AEEE	Phan-Thanh L., et al., "Porcine Retrovirus: Optimal Conditions for its Biochemical Detection," <i>Archives of Virology</i> 123:255-265 (1992)
	AFFF	Rhim et al., "Characterization of murine sarcoma virus transformation of guinea pig cells and activation of an RNA tumor-like virus from nonproducer guinea pig cells," <i>Bibl. Haematol.</i> 153-164 (1975)

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	AGGG	Rubin et al., "Antimicrobial Strategies in the Care of Organ Transplant Recipients," <i>Antimicrobial Agents and Chemotherapy</i> , pp. 619-624 (Apr. 1993)
	AHHH	Schafer et al., "Polypeptides of mammalian oncornaviruses. II Characterization of murine leukemia virus polypeptide (p15) bearing interspecies reactivity," <i>Viol.</i> 63:48-59 (1975)
	AIII	Schafer et al., "Morphological, chemical, and antigenic organization of mammalian C-type viruses," <i>Bibl. Haematol.</i> 497-515 (1975)
	AJJJ	Schafer et al., "Evidence for the existence of different antigenic determinants of the interspecies type in mammalian RNA-C-type tumor viruses," (author's transl.) <i>Z Naturforsch [C]</i> 28:214-222 (1973)
	AKKK	Sherr et al., "Interspecies antigenic determinants of the reverse transcriptases and p30 proteins of mammalian Type C viruses," <i>J. Virol.</i> 15:1440 (1975)
	ALLL	Smith, "Endogenous Retroviruses in Xenografts," <i>New England J. Medicine</i> 328:142-143 (1993)
	AMMM	Starzl et al., "Baboon-to-Human Liver Transplantation," <i>The Lancet</i> 341:65-71 (1993)
	ANNN	Stoye, J.P. and J.M. Coffin, "The dangers of xenotransplantation," <i>Nature Medicine</i> 1(11):1100 (1995)
	AOOO	Strandstrom et al., "C-type particles produced by a permanent cell line from a leukemic pig," <i>Virology</i> 57:175-178 (1974)
	APPP	Suzuka et al., "Molecular Cloning of Unintegrated Closed Circular DNA of Porcine Retrovirus," <i>Febs Letters</i> , Vol. 198, No. 2, pp. 339-343 (1986)
	AQQQ	Suzuka et al., "Some Characteristics of a Porcine Retrovirus From a Cell Line Derived From Swine Malignant Lymphomas," <i>Febs Letters</i> , Vol. 183, pp. 124-128 (1985)
	ARRR	Suzuki et al., "Production and characterization of monoclonal antibodies which affect RNA-dependent DNA polymerase activity of porcine retrovirus reverse transcriptase," <i>Jpn J Vet Sci</i> 50:295-297 (1988)
	ASSS	Takeyama et al., "Enhancement of fibroblast growth factor-induced diacylglycerol formation and protein kinase C activation by colon tumor-promoting bile acid in Swiss 3T3 cells," <i>FEBS</i> 3461 197:339-343 (1986)
	ATTT	Teich, "RNA Tumor Viruses," <i>Taxonomy of Retroviruses</i> , pp. 25-207 (1985)
	AUUU	Te Riele, H. et al., "Highly efficient gene targeting in embryonic stem cells through homologous recombination with isogenic DNA constructs," <i>PNAS USA</i> 89:5128-5132 (1992)
	AVVV	Todaro et al., "Characterization of a Type C virus released from the porcine cell line PK(15)," <i>Virology</i> 58:65 (1974)
	AWWW	Tumilowicz et al., "Concurrent replication of a papovavirus and a C-type virus in the CCL 33 porcine cell line," <i>In Vitro</i> 15:922-928 (1979)
	AXXX	Van der Riet, "Virological Implications of the Use of Primates in Xenotransplantation," <i>Transplant Proceedings</i> Vol. XIX, No. 5, pp. 4068-4069 (1987)
	AYYY	Woods et al., "Antigenic and biochemical characterization of the C-type particle of the stable porcine kidney cell line PK-15," <i>J. Virol.</i> 12:1184 (1973)
	AZZZ	Young, "SPF Swine," <i>Adv. Vet. Sci.</i> Vol. 9:61-112 (1964)

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